Index to Volume

No. 1

N. Yu. Kremliakova, K. V. Barsukova, B. F. Myasoedov (Moscow, USSR)
Behaviour of transplutonium and rare earth elements on TVEX, III. 3

N. R. Das (Calcutta, India)
Preconcentration of rare earths in geological materials with ascorbic acid for their neutron activation analysis 13

P. R. Nair, K. V. Lohithakshan, Mary Xavier, S. G. Marathe, H. C. Jain (Bombay, India)
Determination of uranium and plutonium in plutonium based fuels by sequential amperometric titration 19

N. Ikeda, M. Yoshikawa, S. Murakami, J. Kunika (Ibaraki, Japan)
Speciative determination of phosphorus in environmental water by the isotope exchange method 27

V. V. Ivanenko, A. Yu. Metelev, T. V. Slavkina, N. V. Hieu (USSR and The Socialist Republic of Vietnam)
Instrumental neutron activation determination of rare earth, noble and other elements in mineral raw materials of The Socialist Republic of Vietnam 35

M. A. Chaudry, Noor-Ul-Islam, Z. Yasin (Islamabad, Pakistan)
Separation and analysis of aluminium(III) by cation exchange ion chromatography 43

L. Zikovsky, M. Badillo (Montréal, Québec, CAnada)
Determination of polychlorinated biphenyls by neutron activation and gamma ray spectrometry 51

V. Jovanović, M. S. Jovanović, T. Maksin (Vinča, Yugoslavia)
Effect of aluminium on the radiochemical purity and ^{99m}Tc – MDP biodistribution 57

Mary Xavier, N. Jayanthi (Bombay, India)
A potentiometric method for the determination of uranium by stannous chloride reduction 65

S. P. Hasilkar, N. Gopinath, Keshav Chander, S. G. Marathe, H. C. Jain (Bombay, India)
Complexometric determination of thorium in ThO_2 –PuO_2 69

S. Ahmed, A. Rusheed, M. S. Bhatti (Islamabad, Pakistan)
Liquid – liquid extraction of silver(I) by diphenyl-2-pyridyl-methane in benzene from aqueous mineral acid – thiocyanate solutions 75

N. S. Rajurkar, D. G. Zinjad, S. M. Zambare, A. K. Shah (Pune, India)
Instrumental neutron activation analysis of manganese, copper and vanadium in some commercial steel samples and of copper in copper base alloys 83

S. Musić, M. Ristić, M. Gotić, J. Forić (Zagreb, Yugoslavia)
Corrosion of simulated nuclear waste glass 91

P. Ila (Cambridge, Massachusetts, USA)
Determination of Wyttenbach correction factors in neutron activation system dedicated to trace element analysis of geological samples 103

C. Friedli, M. E. Colin, P. Lerch (Lausanne, Switzerland)
Studies in heavy ion activation analysis, XI. 115

N. Nair, M. R. A. Pillai, R. S. Mani, S. Naik, M. Desai, P. Upadhye, M. P. Colaco (Bombay, India)
A single reagent radioimmunoassay for thyroxine in blood samples absorbed on filter paper for mass screening of neonatal hypothyroidism 129

S. Singh, V. Chakravorty, K. C. Dash (Bhubaneswar, India)
Solvent extraction of uranium(VI) by LIX-54 and its mixtures 137

T. Honda, T. Nozaki, T. Ossaka, T. Oi, H. Kakihana (Kanagawa and Tokyo, Japan)
Nondestructive neutron activation analysis of rare earth elements in hot spring water samples in Kusatsu-shirane area, Japan 143

Z. Slanina (Ulm, BRD)
A note on water dimer isotopomers and their interconversions 153

V. A. Malhara, M. B. A. Vasconcellos (São Paulo, Brasil)
Multielemental analysis of Brazilian milk powder and bread samples by neutron activation 161

A. Yoshioka, K. Nomura, M. Takeya, K. Shimura, K. Masumoto, M. Yagi (Saitama and Sendai, Japan)
Determination of carbon in copper by photon activation analysis 175

S. R. Joshi, R. McNeely (Burlington and Ottawa, Ontario, Canada)
Detection of fallout ^{155}Eu and ^{207}Bi in a ^{210}Pb-dated lake sediment core 183

N. S. Saleh (Amman, Jordan)
Photon and proton induced X-ray cross sections for some elements 193

I. György, L. Kaszanyiczki, G. Földiák (Budapest, Hungary)
Formation and decay of phenoxyl radicals: variation with pH and pulse dose 207

Bibliographic Collection

E. Bujdosó (Budapest, Hungary)
The Chernobyl reactor accident, Part 2 215

No. 2

B. Knobus, W. Rossbander (Dresden, GDR)
Determination of Ge(Li)-detector efficiencies of γ-ray emitting samples for non-calibrated geometrical shape 227

I. L. Szíklai, M. Ördögh, E. Molnár, E. Szabó (Budapest and Vácrátót, Hungary)
Distribution of trace and minor elements in Hungarian spice paprika plants 233

H. Zänker, R. Berndt (Dresden, GDR)
Rough localization of defective PWR fuel rods on the basis of the concentration ratio $^{134}Cs/^{137}Cs$ in the primary coolant 239

E. Maul, D. Wagner, R. Göldner (Leipzig, GDR)
SIACON – equipment for the on-line determination of the silicon content of coal 245

S. Niese, B. Gleisberg, W. Kramer, L. Pfeiffer, C.–D. Werner (Dresden, Potsdam and Freiberg, GDR)
Application of neutron activation analysis for investigating the genesis of tertiary magmatites from the South of the GDR 253

M. N. Schulepnikov, H. Rausch, J. Dubnack, D. Birnstein, S. Niese (Moscow, USSR, Budapest, Hungary and Stahnsdorf and Dresden, GDR)
Interlaboratory comparison of INAA of semiconductor silicon 261

D. Degering, S. Unterricker, W. Stolz (Freiberg, GDR)
Charged particle activation analysis of geological samples at the Rossendorf cyclotron 265

S. Unterricker, Kim Jung Ho, W. Stolz, D. Degering (Freiberg, GDR)
Investigations on the location and construction of a low background gamma-spectrometer 271

S. Siekierski (Warszawa, Poland)
Comparison of yttrium, lanthanides and actinides in respect to unit cell volumes of isostructural compounds and thermodynamic functions of complex formation 279

V. Kliment, R. Šandrik (Bratislava, Czechoslovakia)
XRF and PIXE analysis of metallic glasses 285

W. Goerner, B. Noll, H. Spies, K. Thieme (Dresden, GDR)
Determination of technetium in $^{99}Mo/^{99m}Tc$ – generators 291

N. B. Mikheev, A. N. Kamenskaya, L. N. Auerman (Moscow, USSR)
Lower oxidation states of lanthanides and actinides. Prospects of their use in analytical practice 299

L. Kinova, I. Penev, T. Grigorov (Sofia, Bulgaria)
Neutron activation analysis of human hair for environmental purposes 307

U. Abram, R. Kirmse (Dresden and Leipzig, GDR)
EPR spectroscopy in the analytical chemistry of technetium complexes 311

E. Hensel, R. Groetzschel, E. Richter (Dresden, GDR)
RBS investigations of ion beam mixed hard coatings on tool steel 321

N. Psarros, H. Duschner (Marburg, FRG)
Production and use of carrier-free ^{18}F in studies on the effect of trace amounts of fluoride on the metabolism of the oral cariogenic bacterium Streptococcus mutans 327

M. Csajka (Budapest, Hungary)
Simultaneous radiochemical separation of fractions of radioisotopes of primary nuclear reactor coolant water 333

M. L. Boettger, D. Birnstein, S. Niese (Dresden, GDR)
Determination of Mg, Ti, Ni and Zn in semiconductor silicon by deuteron activation analysis 341

U. Niese, S. Niese (Dresden, GDR)
Application of neutron activation analysis in chemical yield determination for ^{89}Sr and ^{90}Sr separation of environmental samples 347

K. Aleklett, R. Brandt, M. Bronikowski, V. S. Butsev, B. Chasteler, G. Dersch, G. Feige, E. M. Friedlander, E. Ganssauge, G. Haase, J. Herrmann, D. C. Hoffman, B. Judek, P. Kosma, B. A. Kulakov, E.-J. Langrock, D. Lee, W. Loveland, F. Pille, N. T. Porile, W. Schulz, G. T. Seaborg (Nykoeping, Sweden, Marburg, FRG, West Lafayette, IN, USA, Dubna, USSR, Berkeley, CA, USA, Ottawa, Canada, Leipzig, GDR and Corvallis, OR, USA)
Investigation of the unusual behavior of projectile fragments using nuclear chemistry techniques 355

J. Kučera, V. Senft, F. Hůzl, L. Soukal (Řež and Plzeň, Czechoslovakia)
Cadmium and zinc determination by neutron activation analysis and biochemical tests in tissues of workers professionally exposed to cadmium 361

Bibliographic Collection

E. Bujdosó (Budapest, Hungary)
Analysis by nuclear reactions and activation 373

Index to Volume 122 403

Author Index to Volume 122

ABRAM, U., KIRMSE, R.: EPR spectroscopy in the analytical chemistry of technetium complexes, 311

AHMED, S., RUSHEED, A., BHATTI, M. S.: Liquid–liquid extraction of silver(I) by diphenyl-2-pyridyl-methane in benzene from aqueous mineral acid–thiocyanate solutions, 75

ALEKLETT, K., BRANDT, R., BRONIKOWSKI, M., BUTSEV, V. S., CHASTELER, B., DERSCH, G., FEIGE, G., FRIEDLANDER, E. M., GANSSUGE, E., HAASE, G., HERRMANN, J., HOFFMAN, D. C., JUDEK, B., KOSMA, P., KULAKOV, B. A., LANGROCK, E.-J., LEE, D., LOVELAND, W., PILLE, F., PORILE, N. T., SCHULZ, W., SEABORG, G. T.: Investigation of the unusual behaviour of projectile fragments using nuclear chemistry techniques, 355

AUERMAN, L. N., *see* MIKHEEV, N. B., 299

BADILLO, M., *see* ZIKOVSKY, L., 51

BARSUKOVA, K. V., *see* KREMLIAKOVA, N. Yu., 3

BERNDT, R., *see* ZÄNKER, H., 239

BHATTI, M. S., *see* AHMED, S., 75

BIRNSTEIN, D., *see* BOETTGER, M. L., 341

BIRNSTEIN, D., *see* SCHULEPNIKOV, M. N., 261

BOETTGER, M. L., BIRNSTEIN, S., NIESE, S.: Determination of Mg, Ti, Ni and Zn in semiconductor silicon by deuteron activation analysis, 341

BRANDT, R., *see* ALEKLETT, K., 355

BRONIKOWSKI, M., *see* ALEKLETT, K., 355

BUJDOSÓ, E.: Analysis by nuclear reactions and activation, 373

BUJDOSÓ, E.: The Chernobyl reactor accident, Part 2, 215

BUTSEV, V. S., *see* ALEKLETT, K., 355

CHAKRAVORTTY, V., *see* SINGH, S., 137

CHANDER, KESHAV, *see* HASILKAR, S. P., 69

CHASTELER, B., *see* ALEKLETT, K., 355

CHAUDRY, M. A., NOOR-UL-ISLAM, YASIN, Z.: Separation and analysis of aluminium(III) by cation exchange ion chromatography, 43

COLACO, M. P., *see* NAIR, N., 129

COLIN, M. E., *see* FRIEDLI, C., 115

CSAJKA, M.: Simultaneous radiochemical separation of fractions of radioisotopes of primary nuclear reactor coolant water, 333

DAS, N. R.: Preconcentration of rare earths in geological materials with ascorbic acid for their neutron activation analysis, 13

DASH, K. C., *see* SINGH, S., 137

DEGERING, D., UNTERRICKER, S., STOLZ, W.: Charged particle activation analysis of geological samples at the Rossendorf cyclotron, 265

Elsevier Sequoia S. A., Lausanne
Akadémiai Kiadó, Budapest

AUTHOR INDEX

DEGERING, D., *see* UNTERRICKER, S., 271

DERSCH, G., *see* ALEKLETT, K., 355

DESAI, M., *see* NAIR, S., 129

DUBNACK, J., *see* SCHULEPNIKOV, M. N., 261

DUSCHNER, H., *see* PSARROS, N., 327

FEIGE, G., *see* ALEKLETT, K., 355

FÖLDIÁK, K., *see* GYÖRGY, I., 207

FORIĆ, J., *see* MUSIĆ, S., 91

FRIEDLANDER, M., *see* ALEKLETT, K., 355

FRIEDLI, C., COLIN, M. E., LERCH, P.: Studies in heavy ion activation analysis, XI., 115

GANSSAUGE, E., *see* ALEKLETT, K., 355

GLEISBERG, B., *see* NIESE, S., 253

GOERNER, W., NOLL, B., SPIES, H., THIEME, K.: Determination of technetium in ^{99}Mo/^{99m}Tc-generators, 291

GÖLDNER, R., *see* MAUL, E., 245

GOPINATH, N., *see* HASILKAR, S. P., 69

GOTIĆ, M., *see* MUSIĆ, S., 91

GRIGOROV, T., *see* KINOVA, L., 307

GROETZSCHEL, R., *see* HENSEL, E., 321

GYÖRGY, I., KASZANYICZKI, L., FÖLDIÁK, G.: Formation and decay of phenoxyl radicals variation with pH and pulse dose, 207

HAAŠE, G., *see* ALEKLETT, K., 355

HASILKAR, S. P., GOPINATH, N., CHANDER, KESHAV, MARATHE, S. G., JAIN, H. C.: Complexometric determiantion of thorium in ThO_2-PuO_2, 69

HENSEL, E., GROETZSCHEL, R., RICHTER, E.: RBS investigations of ion beam mixed hard coatings on tool steel, 321

HERRMANN, J., *see* ALEKLETT, K., 355

HIEU, N. V., *see* IVANENKO, V. V., 35

HO, KIM JUNG, *see* UNTERRICKER, S., 271

HOFFMAN, D. C., *see* ALEKLETT, K., 355

HONDA, T., NOZAKI, T., OSSAKA, T., OI, T., KAKIHANA, H.: Nondestructive NAA of rare earth elements in hot spring water samples in Kusatsu-shirane area, Japan, 143

HŮZL, F., *see* KUČERA, J., 361

IKEDA, N., YOSHIKAWA, M., MURAKAMI, S., KUNIKA, J.: Speciative determination of phosphorus in environmental water by the isotope exchange method, 27

ILA, P.: Determination of Wyttenbach correction factors in neutron activation system dedicated to trace element analysis of geological samples, 103

IVANENKO, V. V., METELEV, A. Yu., SLAVKINA, T. V., HIEU, N. V.: Instrumental neutron activation determination of rare earth, noble and other elements in mineral raw materials of The Socialist Republic of Vietnam, 35

JAIN, H. C., *see* HASILKAR, S. P., 69

JAIN, H. C., *see* NAIR, P. R., 19

JAYANTHI, N., *see* XAVIER, MARY, 65

JOSHI, S. R., McNEELY, R.: Detection of fallout ^{155}Eu and ^{207}Bi in a ^{210}Pb-dated lake sediment core, 183

JOVANOVIĆ, M. S., *see* JOVANOVIĆ, V., 57

JOVANOVIĆ, V., JOVANOVIĆ, M. S., MAKSIN, T.: Effect of aluminium on the radiochemical purity and ^{99m}Tc–MDP biodistribution, 57

JUDEK, B., *see* ALEKLETT, K., 355

KAKIHANA, H., *see* HONDA, T., 143

KAMENSKAYA, A. N., *see* MIKHEEV, N. B., 299

KASZANYICZKI, L., *see* GYÖRGY, I., 207

KONOVA, L., PENEV, I., GRIGOROV, T.: NAA of human hair for environmental purposes, 307

KIRMSE, R., *see* ABRAM, U., 311

KLIMENT, V., ŠANDRIK, R.: XRF and PIXE analysis of metallic glasses, 285

KNOBUS, B., ROSSBANDER, W.: Determination of Ge(Li)-detector efficiencies of γ-ray emitting samples for non-calibrated geometrical shape, 227

KOSMA, P., *see* ALEKLETT, K., 355

KRAMER, W., *see* NIESE, S., 253

KREMLIAKOVA, N. Yu., BARSUKOVA, K. V., MYASOEDOV, B. F.: Behaviour of transplutonium and rare earth elements on TVEX, III., 3

KUČERA, J., SENFT, V., HŮZL, F., SOUKAL, L.: Cadmium and zinc determination by NAA and biochemical tests in tissues of workers professionally exposed to cadmium, 361

KULAKOV, B. A., *see* ALEKLETT, K., 355

KUNIKA, J., *see* IKEDA, N., 27

LANGROCK, E.-J., *see* ALEKLETT, K., 355

LEE, D., *see* ALEKLETT, K., 355

LERCH, P., *see* FRIEDLI, C., 115

LOHITHAKSHAN, K. V., *see* NAIR, P. R., 19

LOVELAND, W., *see* ALEKLETT, K., 355

MAIHARA, V. A., VASCONCELLOS, M. B. A.: Multielemental analysis of Brazilian milk powder and bread samples by neutron activation, 161

MAKSIN, T., *see* JOVANOVIĆ, V., 57

MANI, R. S., *see* NAIR, N., 129

MARATHE, S. G., *see* HASILKAR, S. P., 69

MARATHE, S. G., *see* NAIR, P. R., 19

MASUMOTO, K., *see* YOSHIOKA, A., 175

MAUL, E., WAGNER, D., GÖLDNER, R.: SIACON – equipment for the on-line determination of the silicon content of coal, 245

McNEELY, R., *see* JOSHI, S. R., 183

METELEV, A. Yu., *see* IVANENKO, V. V., 35

MIKHEEV, N. B., KAMENSKAYA, A. N., AUERMAN, L. N.: Lower oxidation states of lanthanides and actinides. Prospects of their use in analytical practice, 299

MOLNÁR, E., *see* SZIKLAI, I. L., 233

MURAKAMI, S., *see* IKEDA, N., 27

MUSIĆ, S., RISTIĆ, M., GOTIĆ, M., FORIĆ, J.: Corrosion of simulated nuclear waste glass, 91

MYASOEDOV, B. F., *see* KREMLIAKOVA, N. Yu., 3

NAIK, S., *see* NAIR, S., 129

NAIR, N., PILLAI, M. R. A., MANI, R. S., NAIK, S., DESAI, M., UPADHYE, P., COLACO, M. P.: A single reagent radio-

immunoassay for thyroxine in blood samples absorbed on filter paper for mass screening of neonatal hypothyroidism, 129

NAIR, P. R., LOHITHAKSHAN, K. V., XAVIER, MARY, MARATHE, S. G., JAIN, H. C.: Determination of uranium and plutonium in plutonium based fuels by sequential amperometric titration, 19

NIESE, S., GLEISBERG, B., KRAMER, W., PFEIFFER, L., WERNER, C.-D.: Application of NAA for investigating the genesis of tertiary magmatites from the South of the GDR, 253

NIESE, S., *see* BOETTGER, M. L., 341

NIESE, S., *see* NIESE, U., 347

NIESE, S., *see* SCHULEPNIKOV, M. N., 261

NIESE, U., NIESE, S.: Application of NAA in chemical yield determination for ^{89}Sr and ^{90}Sr separation of environmental samples, 347

NOLL, B., *see* GOERNER, W., 291

NOMURA, K., *see* YOSHIOKA, A., 175

NOOR-UL-ISLAM, *see* CHAUDRY, M. A., 43

NOZAKI, T., *see* HONDA, T., 143

OI, T., *see* HONDA, T., 143

OSSAKA, T., *see* HONDA, T., 143

ÖRDÖGH, M., *see* SZIKLAI, I. L., 233

PENEV, I., *see* KINOVA, L., 307

PFEIFFER, L., *see* NIESE, S., 253

PILLAI, M. R. A., *see* NAIR, N., 129

PILLE, F., *see* ALEKLETT, K., 355

PORILE, N. T., *see* ALEKLETT, K., 355

PSARROS, N., DUSCHNER, H.: Production and use of carrier-free ^{18}F in studies on the effect of trace amounts of fluoride on the metabolism of the oral cariogenic bacterium Streptococcus mutans, 327

RAJURKAR, N. S., ZINJAD, D. G., ZAMBARE, S. M., SHAH, A. K.: INAA of manganese, copper and vanadium in some commercial steel samples and of copper in copper base alloys, 83

RAUSCH, H., *see* SCHULEPNIKOV, M. N., 261

RICHTER, E., *see* HENSEL, E., 321

RISTIĆ, M., *see* MUSIĆ, S., 91

ROSSBANDER, W., *see* KNOBUS, B., 227

RUSHEED, A., *see* AHMED, S., 75

SALEH, N. S.: Photon and proton induced X-ray cross sections for some elements, 193

ŠANDRIK, R., *see* KLIMENT, V., 285

SCHULEPNIKOV, M. N., RAUSCH, H., DUBNACK, J., BIRNSTEIN, D., NIESE, S.: Interlaboratory comparison of INAA of semiconductor silicon, 261

SCHULZ, W., *see* ALEKLETT, K., 355

SEABORG, G. T., *see* ALEKLETT, K., 355

SENFT, V., *see* KUČERA, J., 361

SHAH, A. K., *see* RAJURKAR, N. S., 83

SHIMURA, K., *see* YOSHIOKA, A., 175

SIEKIERSKI, S.: Comparison of yttrium, lanthanides and actinides in respect to unit cell volumes of isostructural compunds and thermodynamic functions of complex formation, 279

SINGH, S., CHAKRAVORTTY, V., DASH, K. C.: Solvent extraction of uranium(VI) by LIX-54 and its mixtures, 137

SLANINA, Z.: A note on water dimer isotopomers and their interconversions, 153

SLAVKINA, T. V., *see* IVANENKO, V. V., 35

SOUKAL, L., *see* KUČERA, J., 361

SPIES, H., *see* GOERNER, W., 291

STOLZ, W., *see* DEGERING, D., 265

STOLZ, W., *see* UNTERRICKER, S., 271

SZABÓ, E., *see* SZIKLAI, I. L., 233

SZIKLAI, I. L., ÖRDÖGH, M., MOLNÁR, E., SZABÓ, E.: Distribution of trace and minor elements in Hungarian spice paprika plants, 233

TAKEYA, M., *see* YOSHIOKA, A., 175

THIEME, K., *see* GOERNER, W., 291

UNTERRICKER, S., HO, KIM JUNG, STOLZ, W., DEGERING, D.: Investigations on the location and construction of a low background gamma-spectrometer, 271

UNTERRICKER, S., *see* DEGERING, D., 265

UPADHYE, P., *see* NAIR, N., 129

VASCONCELLOS, M. B. A., *see* MAIHARA, V. A., 161

WAGNER, D., *see* MAUL, E., 245

WERNER, C.-D., *see* NIESE, S., 253

XAVIER, MARY; JAYANTHI, N.: A potentiometric method for the determination of uranium by stannous chloride reduction, 65

XAVIER, MARY, *see* NAIR, P. R., 19

YAGI, M., *see* YOSHIOKA, A., 175

YASIN, Z., *see* CHAUDRY, M. A., 43

YOSHIKAWA, M., *see* IKEDA, N., 27

YOSHIOKA, A., NOMURA, K., TAKEYA, M., SHIMURA, K., MASUMOTO, K., YAGI, M.: Determination of carbon in copper by photon activation analysis, 175

ZAMBARE, S. M., *see* RAJURKAR, N. S., 83

ZÄNKER, H., BERNDT, R.: Rough localization of defective PWR fuel rods on the basis of the concentration ratio $^{134}Cs/^{137}Cs$ in the primary coolant, 239

ZIKOVSKY, L., BADILLO, M.: Determination of polychlorinated biphenyls by neutron activation and gamma-ray spectrometry, 51

ZINJAD, D. G., *see* RAJURKAR, N. S., 83